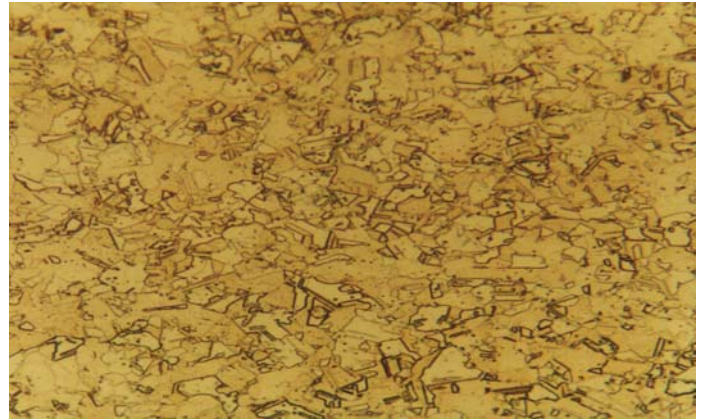


**Material** : Commercial Pure Copper

**Method No.** : D01

**Results**

Since it is a soft material, it is recommended to use short times during mechanical preparation. By using polarized light, the oxide inclusions are easily visible. Twins are typical in annealed microstructure.



**Commercial Pure Copper, Brightfield**  
 Etching: 50ml H<sub>2</sub>O + 50ml ammonia + 1-2 drops H<sub>2</sub>O<sub>2</sub>  
 Magnification: 180X

**Preparation Method:**

**Cutting:** Abrasive Cut-off machine with Metlab Abrasive wheel

**Mounting:** Mounting Press with Phenolic Powder

**Mechanical Preparation:** FORCIPOL Grinding / Polishing Machine + FORCIMAT Automatic Specimen Mover.

| Steps | Surface        | Abrasive              | Lubricant | Force per Sample, (N)/(PSI) | Time min.             | Disc Speed, rpm | Relative Rotation |
|-------|----------------|-----------------------|-----------|-----------------------------|-----------------------|-----------------|-------------------|
| 1     | S/C Paper Disc | 180 Grit              | Water     | 30/60                       | 2 min. or until plane | 300             | Contra            |
| 2     | S/C Paper Disc | 400 Grit              | Water     | 25/5                        | 2                     | 300             | Contra            |
| 3     | S/C Paper Disc | 800 Grit              | Water     | 25/5                        | 2                     | 300             | Contra            |
| 4     | S/C Paper Disc | 1200 Grit             | Water     | 25/5                        | 2                     | 300             | Contra            |
| 5     | Metlab Cloth   | 1μ Diamond Suspension | Blue Lube | 15/3                        | 4                     | 150             | Contra            |

**FOR MORE DETAILED INFORMATION PLEASE REFER TO METLAB PRICE LIST**